

Remarks:

Claims 11-16. Applicants respectfully traverse the Examiner's rejections of Claims 11-16 for the reasons below. Each numbered paragraph below corresponds to that numbered paragraph in the Examiner's June 2, 2006 Office Action.

Continued Examination Under 37 CFR 1.114

1. Applicants thank the Examiner for withdrawal of the previous Office action pursuant to 37 CFR 1.114 and for entry of Applicants' submission filed on March 20, 2006.

Claim Rejections – 35 USC § 102

- 2.-4. The Examiner objected to Claim 11 under 35 U.S.C. § 102(e) as anticipated by Figure 5 in Joshi (US 6,627,991) [also referred to by Examiner as "Mita"]. Applicants respectfully traverse this rejection.

Claim 11 recites, inter alia, "a first leadframe; a second leadframe laminated to a portion of a surface of the first leadframe . . . ; [and] a semiconductor die mounted to another portion of *said* surface." [Emphasis added.] As the claim recites, the die is mounted to the same "said surface" on which the second leadframe is also mounted. In other words, the second leadframe and the die are both mounted on the same surface (i.e., the same side) of the first leadframe.

The Examiner states that Joshi element 104 is met by the first lead frame, Joshi elements 100/102 by the second leadframe, and Joshi element 400 by the semiconductor die. As can be seen from Joshi Figure 5, however, the second leadframe (100/102) does not appear on the same surface of the first lead frame (104) as the semiconductor die (400). Rather, they appear on opposite surfaces. Accordingly, Joshi does not teach each of the elements recited by Claim 11.

Because Joshi does not teach the limitation of "a semiconductor die mounted to another portion of *said* surface" Applicants respectfully request reconsideration and withdrawal of this rejection.

Claim Rejections 35 USC § 103

5.-7. The Examiner rejected Claim 16 under 35 U.S.C. § 103(a) as obvious over Joshi in view of Takekawa (US 4,714,952). Claim 16 is dependent on Claim 11, with the additional limitation that "the semiconductor die is coated with at least one of titanium, tungsten, gold, or a combination thereof for soldering."

The Examiner indicated that Joshi teaches each of the elements of Claim 16, except for the coating of the die with titanium, tungsten, gold, or a combination thereof for soldering. The Examiner read Takekawa to disclose that a semiconductor die can be coated with gold, and concluded that it would be obvious to one of ordinary skill in the art at the time the invention was made to coat the bottom surface of the semiconductor die disclosed by Joshi with gold. Applicants respectfully traverse this rejection.

To make a *prima facie* case of obviousness, the Examiner must meet three criteria as explained in M.P.E.P. § 2143:

2143 Basic Requirements of a *Prima Facie* Case of Obviousness

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

M.P.E.P. § 2143. Applicants respectfully submit that the Examiner's rejection does not satisfy the first and third criteria for establishing a prima facie case of obviousness.

The first criteria requires that there be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Here, there is no teaching or suggestion in the Joshi or Takekawa references to combine their teachings.

The initial burden is on the Examiner to show the suggestion or motivation to combine the references:

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections.

When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper. *Ex parte Skinner*,

M.P.E.P. § 2142. Neither Joshi nor Takekawa contain any suggestion to combine teachings to create the invention described by Claim 16. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection. Should the Examiner maintain this rejection, Applicants respectfully request that the Examiner meet his initial burden and point to the suggestion or motivation in the references themselves, or the state of the art, to combine Joshi with Takekawa.

The third criteria requires that the prior art references "must teach or suggest all the claim limitations." There is no teaching or suggestion in Joshi or Takekawa of "a semiconductor die mounted to another portion of *said* surface" on which the second leadframe is mounted of independent Claim 11, from which Claim 16 depends, for the reasons explained above under the § 102 rejection of Claim 11. For this reason alone, claim 16 is not obvious over Joshi in view of Takekawa.

Because there is no suggestion in Joshi or Takekawa to combine their teachings, and because neither Joshi nor Takekawa teach "a semiconductor die mounted to another portion of *said* surface" on which the second leadframe is mounted, Applicants respectfully request reconsideration and withdrawal of this rejection.

Allowable Subject Matter

8. Applicants thank the Examiner for allowance of Claims 12 and 15.

9. The Examiner objected to Claims 13 and 14 as dependent on rejected base Claim 11, but indicated that Claims 13 and 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for this conditional allowance of Claim 13 and 14. However, for the reasons expressed above, Applicants believe that rejected base Claim 11 is allowable and respectfully request reconsideration and withdrawal of this objection.

Response to Arguments

- 10.-11. The Examiner found Applicants' prior remarks unpersuasive. The Examiner stated that "Joshi does not teach a second leadframe laminated to a portion of a surface of said leadframe." Applicants respectfully submit that this interpretation of the Applicants' prior Remarks is incorrect for the following reasons.

In their Remarks filed March 20, 2006, Applicants indicated that "the second leadframe and semiconductor die are locate *on the same surface* of the first leadframe." Remarks ¶ 3. The Applicants wished to emphasize that the die and the second leadframe must appear on the same surface (i.e., side) of the first leadframe. Joshi does not teach a die and second leadframe mounted on the same side; in Joshi, the die and leadframe are mounted on *opposite* sides of the first leadframe.

In view of this clarification, and Applicants' remarks above in response to the Examiner's 102(e) rejection of Claim 11, Applicants respectfully request reconsideration of their remarks, and withdrawal of the Examiner's rejection.

Conclusion

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

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